LPDES PERMIT NO. LA0087157, AI No. 18070

LPDES FACT SHEET and RATIONALE
FOR THE DRAFT LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM
(LPDES) PERMIT TO DISCHARGE TO WATERS OF LOUISIANA

I. Company/Facility Name: Westlake Styrene LP
Styrene Monomer Facility
P.O. Box 2029
Sulphur, LA 70664

II. Issuing Office: Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

III. Prepared By: Jenniffer Sheppard
Industrial Permits Section
Water Permits Division
Phone #: 225-219-3138
E-mail: jenniffer.sheppard@la.gov

Date Prepared: September 26, 2007

IV. Permit Action/Status:

A. Reason For Permit Action:

Proposed reissuance of an existing Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term following regulations promulgated at LAC 33:IX.2711/40 CFR 122.46*.

* In order to ease the transition from NPDES to LPDES permits, dual regulatory references are provided where applicable. The LAC references are the legal references while the 40 CFR references are presented for informational purposes only. In most cases, LAC language is based on and is identical to the 40 CFR language. 40 CFR Parts 401, 405-415, and 417-471 have been adopted by reference at LAC 33:IX.4903 and will not have dual references. In addition, state standards (LAC 33:IX. Chapter 11) will not have dual references.

LAC 33:IX Citations: Unless otherwise stated, citations to LAC 33:IX refer to promulgated regulations listed at Louisiana Administrative Code, Title 33, Part IX.

40 CFR Citations: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations in accordance with the dates specified at LAC 33:IX.4901, 4903, and 2301.F.

B. NPDES permit - NPDES permit effective date: N/A
NPDES permit expiration date: N/A

EPA has not retained enforcement authority.

C. LPDES permit - LPDES permit effective date: April 1, 2002
LPDES permit expiration date: March 31, 2007
LPDES Permit modification effective date: June 3, 2002

D. Application received on September 28, 2006. Additional information dated on December 6, 2006, March 22, 2007, September 5, 2007, and e-mail correspondence on September 26, 2007.

V. Facility Information:

A. Location - 900 Louisiana Highway 108 in Sulphur

B. Applicant Activity -

According to the application, Westlake Styrene LP, Styrene Monomer Facility manufactures 510 million pounds per year of styrene monomer using a two reaction step method followed by purification.

Westlake has also proposed an expansion project at this facility that will occur in two phases. Phase I will consist of replacing the following existing equipment with larger equipment: MR-201 A/B Styrene Reactors, TT-229 reheater, AS-201 reboiler, and the TT-201/202/203 triple exchanger. Additionally, Phase I will include replacement of the existing MR-201 A/B styrene reactor catalyst and the addition of a new vent gas compressor, a new AS-202 reboiler, a new cooling tower cell, new heat exchangers, and the installation of catalyst stabilization technology. Phase I is expected to increase styrene production by 100 million pounds per year and is scheduled for completion and startup in the 4th quarter of 2007.

The Phase I expansion project will have an effect on the quantity of discharge from Outfall 001. There will be additional concrete/curbing which will collect additional process area storm water into the process wastewater tank for treatment in the stripper. In addition to additional stormwater, the process and utility wastewaters from the former Internal Outfall 102 are expected to increase 18% (individual flows will be discussed in the technology limitation section of this Fact Sheet) based on 500 million pounds per year to 600 pounds per year production increase. All increases associated with Phase I will be incorporated to be effective upon the effective date of the permit.

Phase II is expected to increase styrene production capacity by an additional 150 million pounds per year and is scheduled for completion and startup in the 4th quarter of 2010. Per the September 28, 2006 permit renewal application, Westlake will address Phase II at a later date. Therefore, limitations for Phase II have not been incorporated into this permit renewal.

Whole Effluent Toxicity (WET) testing is not a direct requirement in this LPDES permit. Since the discharges from this facility commingle with those of Westlake Petrochemicals Ethylene (LA0082511) and Westlake Petrochemicals Polymers III Unit (LA0103004), toxicity sampling for all three has been established as a requirement of Westlake's Polymers III Unit LPDES Permit, LA0103004).

C. Technology Basis - (40 CFR Chapter 1, Subchapter N/Parts 401, 405-415, and 417-471 have been adopted by reference at LAC 33:IX.4903)

Guideline	Reference
Organic Chemicals, Plastics, and Synthetic Fibers	40 CFR 414 (Subparts F and J)

Process Flow - 0.11206 MGD (Estimated Flow, based on projected Phase 1 flow increase)

CPI Separator	0.02300 MGD
Contaminated Stormwater	0.06900 MGD
Wastewater Blowdown from Process	0.02006 MGD
Total Process Flow	0.11206 MGD

Other sources of technology based limits:
LDEQ Stormwater Guidance, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6).
Louisiana Water Quality Management Plan for Sanitary Dischargers.
LDEQ Sanitary General Permits
Best Professional Judgement

D. Fee Rate -
1. Fee Rating Facility Type: major
2. Complexity Type: VI
3. Wastewater Type: II
4. SIC code: 2865

E. Continuous Facility Effluent Flow - 0.2372863 MGD (Max 30-Day)

The Max 30-Day flow was taken from the September 2006 LPDES permit application and the December 6, 2006 application addendum. The flows from the two continuous internal outfalls were added together to get this value; 0.091988 MGD (former internal outfall 101) and 0.1452983 MGD (former internal outfall 102).

VI. Receiving Waters:

Calcasieu River via pipeline (Outfall 001) and Indian Marais via an open ditch (Outfall 002)

1. TSS (15%), mg/L: 10.50
2. Average Hardness, mg/L $CaCO_3$: 977.65
3. Critical Flow, cfs: 2898
4. Mixing Zone Fraction: 0.333333
5. Harmonic Mean Flow, cfs: 8694
6. River Basin: Calcasieu River, Segment No. 030301
7. Designated Uses:
   The designated uses are primary contact recreation, secondary contact recreation, and fish and wildlife propagation.

Information based on the following: LAC 33:IX Chapter 11 and Recommendation(s) from the Engineering Section. This data was presented in a memorandum from Brian Baker (LDEQ) to Jenniffer Sheppard (LDEQ) dated December 19, 2006 (See Appendix C).

VII. Outfall Information:

Outfall 001 - Phase 1 Expansion Project

A. Type of wastewater - the discharge of treated process wastewater and process area stormwater (including contaminated storm water transported to the Styrene Monomer Facility for treatment from the Westlake Styrene Marine Terminal, LPDES permit LA0089362); de minimis amounts of miscellaneous wastewaters including equipment wash water, miscellaneous process wastewater streams, vacuum truck or wastewater from portable tanks, slop oil tank decant water, pump seal water, diked area/area sump wastewater, and eyewash and safety shower station water; utility wastewater including cooling tower blowdown, boiler blowdown, and demineralization unit wastewater; firewater; and treated sanitary wastewater from Internal Outfall 103.

B. Location - at the point of discharge from the Styrene Monomer Facility, prior to combining with the wastewaters from Westlake Petrochemicals - Ethylene Manufacturing Complex and Westlake Petrochemicals - POLY III Unit and prior to combining with the waters of the Calcasieu River at Latitude 30°10'35", Longitude 93°21'22".

C. Treatment - treatment of process wastewaters consists of:
- CPI separator
- steam stripping
- carbon filtration
- neutralization

Treatment - treatment of utility wastewaters consists of:
- neutralization
- dechlorination

D. Flow - Continuous Flow 0.2494 MGD (Estimated Flow, based on projected Phase 1 flow increase).

Process Wastewater	0.11206 MGD
Sanitary Wastewater	0.004 MGD
Utility Wastewater	0.13334 MGD

* Specific component waste streams are defined at Appendix A-1 and Appendix E.

E. Receiving waters - Calcasieu River via pipeline.

F. Basin and segment - Calcasieu River Basin, Segment 030301

Internal Outfall 103

A. Type of wastewater - treated sanitary wastewater.

B. Location - at the point of discharge from the treatment facility for sanitary wastewater to a pipe, which co-mingles effluent from the facility process and utility wastewater, prior to discharge at Outfall 001. This internal outfall is located at Latitude 30°10'35", Longitude 93°21'29".

C. Treatment - treatment of process wastewaters consists of:
- biological oxidation
- chlorination

D. Flow - 0.004 MGD (estimated flow).

E. Receiving waters - Calcasieu River via Final Outfall 001.

F. Basin and segment - Calcasieu River Basin, Segment 030301

Outfall 002

A. Type of wastewater - the discharge of uncontaminated stormwater runoff, utility fire test water overflow, excess clarifier water, demineralization water overflow, and firewater pump cooling water.

B. Location - at the point of discharge from the collection facility prior to combining with the waters of Indian Marais at Latitude 30°10'30", Longitude 93°21'30".

C. Treatment - None

D. Flow - Intermittent

E. Receiving waters - Indian Marais via an open ditch

F. Basin and segment - Calcasieu River Basin, Segment 030301

VIII. Proposed Permit Limits:

The specific effluent limitations and/or conditions will be found in the draft permit. Development and calculation of permit limits are detailed in the Permit Limit Rationale section below.

Summary of Proposed Changes From the Current LPDES Permit:

A. Outfall 001 - Internal Outfalls 101 and 102 have been deleted. The previous Fact Sheet stated that the process and utility waste streams do not share treatment systems, and are therefore monitored at separate internal outfalls. Upon further investigation, Westlake has made the determination that portions of the utility waste stream (former Outfall 102) actually consists of recycled process wastewaters. In order to accurately characterize the wastestreams and apply the OCPSF Guidelines, LDEQ has determined that it is appropriate

apply all limitations at a single point of compliance, eliminating the need for these internal outfalls. Therefore, OCPSF Guidelines will be applied to process discharges, with an additional BPJ allocation (for BOD_5 and TSS) for utility wastewaters. These limitations will be applied at Outfall 001.

B. Outfall 001 - In addition to OCPSF guidelines for process wastewaters and BPJ allocation for the other utility wastewaters, an additional BOD_5 and TSS allocation has also been established at this outfall to account for the sanitary discharges from Internal Outfall 103.

C. Outfall 001 - Daily maximum loadings have been added to this outfall for Total Copper and Total Mercury as per the Upper Calcasieu Estuary TMDL, issued in the Federal Register on June 13, 2002. Quarterly monitoring has been established based on the requirements of the TMDL.

D. Outfall 001 - Monthly Average loadings have been established at this outfall for Benzo(a)anthracene and Benzo(a)pyrene as per the Upper Calcasieu Estuary TMDL, issued in the Federal Register on June 13, 2002. Quarterly monitoring has been established based on the requirements of the TMDL.

E. Outfall 001 - Westlake requests that the Max 30-Day Flow for this outfall be used for the Water Quality Standards Screen to account for variability in flow rates. This request has been granted. The Max 30-Day flow of 0.2372863 MGD (Max 30 Day values of Internal Outfall 101 + 201 as provided in the lab analysis section of the September 6, 2006 renewal application and in the December 6, 2006 addendum to the permit application) has been used for the water quality standards screen.

F. Outfall 001 (in reference to former Internal Outfall 101) - Westlake requests a reduction in the measurement frequencies for BOD_5 and TSS from 1/week to 1/ 2 months based on the EPA guidance document "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies". This request has been denied per department discretion. Although Westlake does qualify for the requested reductions, the Department has determined that 1/ 2 months sampling is not an adequate frequency for conventional and non-conventional parameters for major facilities. Therefore, the frequency for BOD_5 and TSS has been retained at 1/week.

G. Outfall 001 (in reference to former Internal Outfall 101) - Westlake requests a reduction in the measurement frequencies for Benzene, Chloroform, and Ethylbenzene from 1/week to 1/ 2 months and for Toluene and Phenol from 1/month to 1/6 months based on the EPA guidance document "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies". This request has been partially granted per department discretion. Therefore, based on best professional judgment, compliance history, and in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies," the measurement frequencies for Benzene, Chloroform, and Ethylbenzene has been reduced from 1/week to 1/month and the frequencies for Toluene and Phenol have been reduced from 1/month to 1/quarter.

H. Outfall 001 (in reference to former Internal Outfall 101) - Westlake requests that the Max 30-Day Flows be used for the OCPSF Technology-Based Limits. This request has been granted. The values used to calculate the Technology-Based Limits (see Appendix A-1)

come from the projected Max 30-Day value based on the Phase 1 flow increase permit application addendum, received on September 5, 2007 and the e-mail correspondence dated September 26, 2007.

I. Outfall 001 (in reference to former Internal Outfall 102) - Westlake requests that zinc be deleted as a parameter from this outfall on the basis that (1) historical monitoring has demonstrated that zinc is not present at environmentally significant levels, (2) Westlake contributes no zinc to the utility wastewaters, and (3) any zinc that may be intermittently detected at levels marginally above the minimum quantification level (MQL) result from ambient concentrations in the raw intake water from the Sabine River Diversion System. Based on the given information, as well as a DMR review to confirm these findings (a total of 34 samples were reported from November 2001 through January 2007 and the reported value was less than 3% of the permit limitation of 1.0 mg/L Monthly Average and Daily Maximum). Therefore, the request to delete zinc as a parameter has been granted.

J. Internal Outfall 103 - Since BOD_5 and TSS are now parameters being sampled at Final Outfall 001 (See Fact Sheet, Part VIII, Paragraphs A and B), internal monitoring is no longer necessary. An allocation has been established at the final outfall to account for this discharge. Therefore, BOD_5 and TSS limitations have been deleted from this outfall.

K. Outfall 002 - A Monthly Average limitation of 6.0 standard units and a Daily Maximum limitation of 9.0 standard units has replaced the previous report only requirement. Ph limitations have been established in accordance with LAC 33:IX.1113.C.1.

L. A Minimum Quantification Level (MQL) evaluation was done for the parameters listed in the Calcasieu Estuary Toxics TMDL. The evaluation was done to determine compliance with the waste load allocations (WLAs) established in the TMDL and to ensure state water quality standards are being met. Based on Westlake's flow and the assigned WLAs, it has been determined that site specific MQLs are not necessary to ensure compliance and therefore, the MQLs listed in Part II.J of the permit are sufficient at this time.

IX. Permit Limit Rationale:

The following section sets forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. Also set forth are any calculations or other explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under LAC 33:IX.2707/40 CFR Part 122.44 and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed.

A. TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Following regulations promulgated at LAC 33:IX.2707.L.2.b/40 CFR Part 122.44(l)(2)(ii), the draft permit limits are based on either technology-based effluent limits pursuant to LAC 33:IX.2707.A/40 CFR Part 122.44(a) or on State water quality standards and requirements pursuant to LAC 33:IX.2707.D/40 CFR Part 122.44(d), whichever are more stringent.

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Regulations promulgated at LAC 33:IX.2707.A/40 CFR Part 122.44(a) require technology-based effluent limitations to be placed in LPDES permits based on effluent limitations guidelines where applicable, on BPJ (best professional judgement) in the absence of guidelines, or on a combination of the two. The following is a rationale for types of wastewaters. See outfall information descriptions for associated outfall(s) in Section VII.

1. Outfalls 001 and 103 - Process, Utility & Sanitary

***Outfall 001** - the discharge of treated process wastewater and process area stormwater (including contaminated storm water transported to the Styrene Monomer Facility for treatment from the Westlake Styrene Marine Terminal, LPDES permit LA0089362); de minimis amounts of miscellaneous wastewaters including equipment wash water, miscellaneous process wastewater streams, vacuum truck or wastewater from portable tanks, slop oil tank decant water, pump seal water, diked area/area sump wastewater, and eyewash and safety shower station water; utility wastewater including cooling tower blowdown, boiler blowdown, and demineralization unit wastewater; firewater; and treated sanitary wastewater from Internal Outfall 103.

Westlake Group, Westlake Styrene LP is subject to Best Practicable Control Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitation guidelines listed below:

Manufacturing Operation	Guideline
Organic Chemical Manufacturing	40 CFR Part 414, Subpart F and J

PARAMETER	MONTHLY AVERAGE LBS/DAY	DAILY MAXIMUM LBS/DAY
Flow	Report	Report (continuous recording)
pH (standard units)	6.0	9.0 (continuous recording)
BOD_5	37	99
TSS	57	182
Benzo(a)anthracene (*1)	0.01530	---
Benzo(a)pyrene(*1)	0.01530	---
Acrylonitrile	0.09	0.22
Benzene	0.05	0.13
Carbon Tetrachloride	0.13	0.36
Chlorobenzene	0.13	0.36
Chloroethane	0.10	0.28
Chloroform	0.10	0.30
1,1-Dichloroethane	0.02	0.06
1,2-Dichloroethane	0.17	0.54
1,1-Dichloroethylene	0.02	0.06
1,2-trans-Dichloroethylene	0.02	0.06
1,2-Dichloropropane	0.18	0.74
1,3-Dichloropropylene	0.18	0.74
Ethylbenzene	0.13	0.36
Methyl Chloride	0.10	0.28
Methylene Chloride	0.03	0.16
Tetrachloroethylene	0.05	0.15
Toluene	0.03	0.07
1,1,1-Trichloroethane	0.02	0.06

PARAMETER	MONTHLY AVERAGE LBS/DAY	DAILY MAXIMUM LBS/DAY
1,1,2-Trichloroethane	0.03	0.12
Trichloroethylene	0.02	0.06
Vinyl Chloride	0.09	0.16
2,4-Dimethylphenol	0.02	0.04
4,6-Dinitro-o-cresol	0.07	0.26
2,4-Dinitrophenol	1.13	4.01
2-Nitrophenol	0.06	0.22
4-Nitrophenol	0.15	0.54
Phenol	0.02	0.04
Acenaphthene	0.02	0.04
Acenaphthylene	0.02	0.04
Anthracene	0.02	0.04
3,4-Benzofluoranthene	0.02	0.04
Benzo(k)fluoranthene	0.02	0.04
Bis(2-ethylhexyl)phthalate	0.09	0.24
Chrysene	0.02	0.04
1,2-Dichlorobenzene	0.18	0.74
1,3-Dichlorobenzene	0.13	0.36
1,4-Dichlorobenzene	0.13	0.36
Diethyl phthalate	0.04	0.11
Dimethyl phthalate	0.02	0.04
Di-n-butyl phthalate	0.02	0.04
Fluoranthene	0.02	0.05
Fluorene	0.02	0.04
Hexachlorobenzene(*2)	0.012	0.028
Hexachlorobutadiene	0.13	0.36

PARAMETER	MONTHLY AVERAGE LBS/DAY	DAILY MAXIMUM LBS/DAY
Hexachloroethane	0.18	0.74
Naphthalene	0.02	0.04
Nitrobenzene	2.09	5.98
Phenanthrene	0.02	0.04
Pyrene	0.02	0.04
1,2,4-Trichlorobenzene	0.18	0.74

(*1) TMDL Requirement (See Water Quality Section for further explanation).
(*2) The Monthly Average and Daily Maximum Values listed are water quality based limitations.

Calculations and basis of permit limitations are found at Appendix A and associated appendices. See below for site-specific considerations.

Site-Specific Consideration(s)

Flow - established in accordance with LAC 33:IX.2707.I.1.b. This requirement has been retained from the current LPDES permit, effective on April 1, 2002.

PH - established in accordance with LAC 33:IX.1113.C.1. This requirement has been retained from the current LPDES permit, effective on April 1, 2002.

Benzo(a)anthracene, and Benzo(a)pyrene - monthly average and daily maximum limitations are required under the OCPSF Guidelines under 40 CFR 414, Subpart F for the Commodity Organics Subcategory. However, these limitations were established as water quality limits based on the Calcasieu Toxics TMDL.

BOD_5, Acrylonitrile, Benzene, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Ethylbenzene, Methyl Chloride, Methylene Chloride, Tetrachloroethylene, Toluene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, 2,4-Dimethylphenol, 4,6-Dinitro-o-cresol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Phenol, Acenaphthene, Acenaphthylene, Anthracene, 3,4-Benzofluoranthene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Fluoranthene, Fluorene, Hexachlorobenzene, Hexachlorobutadiene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, 1,2,4-Trichlorobenzene - limitations established in accordance with OCPSF Guidelines under 40 CFR 414, Subpart F for the Commodity Organics Subcategory based on the process discharge of 0.11206 MGD.

***Internal Outfall 103** - the discharge of treated sanitary wastewater.

Sanitary wastewaters (internal or external) are regulated in accordance with LAC 33:IX.711 or 709.B, by BPJ utilizing the sanitary general permits issued by this Office, and the Louisiana Water Quality Management Plan, Appendices B (Areawide Sanitary Effluent Limits Policy) and C (Statewide Sanitary Effluent Limits Policy), as applicable.

PARAMETER	MONTHLY AVERAGE LBS/DAY	WEEKLY AVERAGE LBS/DAY
Flow	Report	Report
Fecal Coliform (colonies/100 ml)	200	400

Site-Specific Consideration(s)

According to the application submitted by the permittee, dated September 2006, the unit is currently not in use. However, potential exists for the start-up of this unit, which will have the discharge co-mingle with the discharge from the process wastewater and the utility wastewater units and ultimately discharge to Final Outfall 001.

BOD_5 and TSS - Allocations for these parameters have been established at Final Outfall 001. The concentrations applied are 30 mg/L Monthly Average and 45 mg/L Daily Maximum for both parameters, using a flow rate of 0.004 MGD.

Flow - established in accordance with LAC 33:IX.2707.I.1.b. This requirement has been retained from the current LPDES permit, effective on April 1, 2002.

Fecal Coliform - The Monthly Average and Daily Maximum limitations have been retained from the current LPDES permit, effective on April 1, 2002.

2. Outfall(s) 002 - Commingled Stormwater & Utility Wastewater

***Outfall 002** - the discharge of uncontaminated stormwater runoff, utility fire test water overflow, excess clarifier water, demineralization water overflow, and firewater pump cooling water.

Low potential contaminated stormwater commingled with de minimis amounts of utility wastewaters shall receive the following BPJ limitations:

PARAMETER	MONTHLY AVERAGE MG/L	DAILY MAXIMUM MG/L
Flow	Report	Report
TOC	---	50
Oil & Grease	---	15
BTEX	---	0.25
pH (standard units)	6.0	9.0

Site-Specific Consideration(s)

Flow - established in accordance with LAC 33:IX.2707.I.1.b. This requirement has been retained from the current LPDES permit, effective on April 1, 2002.

PH - established in accordance with LAC 33:IX.1113.C.1.

TOC and Oil & Grease - established in accordance with current stormwater guidance. These limitations have been retained from the current LPDES permit, effective on April 1, 2002.

BTEX - Benzene, Ethylbenzene, Toluene, and Xylene (BTEX) is limited in the current permit for this outfall with a daily max limit of 0.25 mg/l. The manufacturing process used for styrene has a reasonable potential to produce concentrations of BTEX that may be distributed outside the process area. This requirement has been retained from the current LPDES permit, effective on April 1, 2002.

In accordance with LAC 33:IX.2707.I.3 and [40 CFR 122.44(I)(3) and (4)], a Part II condition is proposed for applicability to all storm water discharges from the facility, either through permitted outfalls or through outfalls which are not listed in the permit or as sheet flow. The Part II condition requires a Storm Water Pollution Prevention Plan (SWP3) within six (6) months of the effective date of the final permit, along with other requirements. If the permittee maintains other plans that contain duplicative information, those plans could be incorporated by reference to the SWP3. Examples of these type plans include, but are not limited to: Spill Prevention Control and Countermeasures Plan (SPCC), Best Management Plan (BMP), Response Plans, etc. The conditions will be found in the draft permit. Including

Best Management Practice (BMP) controls in the form of a SWP3 is consistent with other LPDES and EPA permits regulating similar discharges of stormwater associated with industrial activity, as defined in LAC 33:IX.2522.B.14 [40 CFR 122.26(b)(14)].

C. WATER QUALITY-BASED EFFLUENT LIMITATIONS

Technology-based effluent limitations and/or specific analytical results from the permittee's application were screened against state water quality numerical standard based limits by following guidance procedures established in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001. Calculations, results, and documentation are given in Appendix B.

In accordance with LAC 33:IX.2707.D.1/40 CFR § 122.44(d)(1), the existing (or potential) discharge (s) was evaluated in accordance with the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001, to determine whether pollutants would be discharged "at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard." Calculations, results, and documentation are given in Appendix B.

The following pollutants received water quality based effluent limits:

POLLUTANT(S)
Hexachlorobenzene
Total Copper(*)
Total Mercury(*)
Benzo(a)anthracene(*)
Benzo(a)pyrene(*)

(*) Water Quality Parameters required by the Calcasieu Toxics Estuary TMDL.

Minimum quantification levels (MQL's) for state water quality numerical standards-based effluent limitations are set at the values listed in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001. They are also listed in Part II of the permit.

TMDL Waterbodies

Outfalls 001 and 002

The discharges from Outfalls 001 and 002 include treated process wastewater and process area stormwater (including contaminated storm water transported to the Styrene Monomer Facility for treatment from the Westlake Styrene Marine Terminal, LPDES permit LA0089362); de minimis amounts of miscellaneous wastewaters including equipment wash water, miscellaneous process wastewater streams, vacuum truck or wastewater from

portable tanks, slop oil tank decant water, pump seal water, diked area/area sump wastewater, and eyewash and safety shower station water, utility wastewater including cooling tower blowdown, boiler blowdown, and demineralization unit wastewater, fire test water overflow, excess clarifier water, and firewater pump cooling water; treated sanitary wastewater; and uncontaminated stormwater are to Calcasieu River Basin, Segment No. 030301. Subsegment 030301 was not listed on the 2004 303(d) list of impairments due to the Upper Calcasieu Estuary Toxics TMDL being issued June 13, 2002. This TMDL addressed Copper, Mercury, and Priority Organics.

Copper, Mercury, and Priority Organics

The TMDL for Toxics for the Calcasieu Estuary was finalized on June 13, 2002, addressing the presence of toxic substances, including Copper, Mercury, and Priority Organics in the watershed. Total Copper, Total Mercury, Benzo(a)anthracene, and Benzo(a)pyrene are not expected to be present in this low contamination potential stormwater commingled with de minimis amounts of utility wastewater of Outfall 002. A review of lab results submitted as part of the September 2006 LPDES permit renewal application showed that the results were below the minimum quantification level for all parameters. Therefore, no additional requirements will be placed in the permit for Outfall 002.

The applicant's facility received the following limitations/requirements in this TMDL at Outfall 001:

The effluent limits are proposed to commence on the effective date of the permit.

PARAMETER(S)	MONTHLY AVERAGE LIMIT (LBS/DAY)	DAILY MAX LIMIT (LBS/DAY)
Total Copper	---	0.22700
Total Mercury	---	0.00157
Benzo(a)anthracene	0.01530	---
Benzo(a)pyrene	0.01530	---

A reopener clause will be established in the permit to include more stringent limits based on final loading allocations in the completed and approved TMDL.

Monitoring frequencies for water quality based limited parameters are established in accordance with the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001.

D. MONITORING FREQUENCIES

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity [LAC 33:IX.2715/40 CFR 122.48(b)] and to assure compliance with permit limitations [LAC 33:IX.2707.I./40 CFR 122.44(I)]. The following section(s) explain the rationale for the monitoring frequencies stated in the draft permit.

1. Outfalls 001, 101, 102, and 103 - Process Wastewaters, Commingled with Utility Wastewaters and Sanitary Wastewater.

***Outfall 001** - the discharge of treated process wastewater and process area stormwater (including contaminated storm water transported to the Styrene Monomer Facility for treatment from the Westlake Styrene Marine Terminal, LPDES permit LA0089362); de minimis amounts of miscellaneous wastewaters including equipment wash water, miscellaneous process wastewater streams, vacuum truck or wastewater from portable tanks, slop oil tank decant water, pump seal water, diked area/area sump wastewater, and eyewash and safety shower station water; utility wastewater including cooling tower blowdown, boiler blowdown, and demineralization unit wastewater; firewater; and treated sanitary wastewater from Internal Outfall 103.

Flow and pH shall be monitored continuously. These monitoring frequencies were retained from the current permit, effective on April 1, 2002.

PARAMETER(S)	MONITORING FREQUENCY
Flow	Continuous
pH	Continuous

BOD_5 and TSS - Westlake Styrene requested a frequency reduction from 1/week to 1/ 2 months based on the EPA guidance document "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies". This request was denied per department discretion. Although Westlake does qualify for the requested reduction, the Department has determined that 1/ 2 months sampling is not an adequate frequency for conventional and non-conventional parameters for major facilities. Therefore, the frequency for BOD_5 and TSS has been retained at 1/week.

PARAMETER(S)	MONITORING FREQUENCY
BOD_5	1/week
TSS	1/week

Benzene, Chloroform, and Ethylbenzene - Westlake Styrene requested a frequency reduction from 1/week to 1/ 2 months. This request was partially granted at the Departments's discretion. Based on best professional judgment, compliance history, and in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies," the measurement frequencies for Benzene, Chloroform, and Ethylbenzene has been reduced from 1/week to 1/month.

PARAMETER(S)	MONITORING FREQUENCY
Benzene	1/month
Chloroform	1/month
Ethylbenzene	1/month

Total Copper, Total Mercury, Benzo(a) anthracene, and Benzo(a) pyrene shall be monitored 1/quarter. These monitoring frequencies were established in accordance with the Upper Calcasieu Estuary TMDL issued in the Federal Register on June 13, 2002.

Toluene and Phenol - Westlake Styrene requested a frequency reduction from 1/week to 1/ 6 months. This request was partially granted at the Departments's discretion. Based on best professional judgment, compliance history, and in accordance with the requirements stated in the USEPA Memorandum "Interim Guidance for Performance Based Reductions of NPDES Permit Monitoring Frequencies," the measurement frequencies for Toluene and Phenol have been reduced from 1/month to 1/quarter.

PARAMETER(S)	MONITORING FREQUENCY
Total Copper	1/quarter
Total Mercury	1/quarter
Benzo(a)anthracene	1/quarter
Benzo(a)pyrene	1/quarter
Toluene	1/quarter
Phenol	1/quarter

Acrylonitrile, Carbon Tetrachloride, Chlorobenzene, Chloroethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Methyl Chloride, Methylene Chloride, Tetrachloroethylene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, 2,4-Dimethylphenol, 4,6-Dinitro-o-cresol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Acenaphthene, Acenaphthylene, Anthracene, 3,4-Benzofluoranthene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Fluoranthene, Fluorene, Hexachlorobenzene, Hexachlorobutadiene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, 1,2,4-Trichlorobenzene - the monitoring frequencies were retained from the current permit, effective on April 1, 2002.

PARAMETER(S)	MONITORING FREQUENCY
Acrylonitrile	1/year
Carbon Tetrachloride	1/year
Chlorobenzene	1/year
Chloroethane	1/year
1,1-Dichloroethane	1/year
1,2-Dichloroethane	1/year
1,1-Dichloroethylene	1/year
1,2-trans-Dichloroethylene	1/year
1,2-Dichloropropane	1/year
1,3-Dichloropropylene	1/year
Methyl Chloride	1/year
Methylene Chloride	1/year
Tetrachloroethylene	1/year
1,1,1-Trichloroethane	1/year
1,1,2-Trichloroethane	1/year
Trichloroethylene	1/year
Vinyl Chloride	1/year
2,4-Dimethylphenol	1/year
4,6-Dinitro-o-cresol	1/year
2,4-Dinitrophenol	1/year
2-Nitrophenol	1/year
4-Nitrophenol	1/year
Acenaphthene	1/year
Acenaphthylene	1/year
Anthracene	1/year
3,4-Benzofluoranthene	1/year
Benzo(k)fluoranthene	1/year

PARAMETER(S)	MONITORING FREQUENCY
Bis(2-ethylhexyl)phthalate	1/year
Chrysene	1/year
1,2-Dichlorobenzene	1/year
1,3-Dichlorobenzene	1/year
1,4-Dichlorobenzene	1/year
Diethyl phthalate	1/year
Dimethyl phthalate	1/year
Di-n-butyl phthalate	1/year
Fluoranthene	1/year
Fluorene	1/year
Hexachlorobenzene	1/year
Hexachlorobutadiene	1/year
Hexachloroethane	1/year
Naphthalene	1/year
Nitrobenzene	1/year
Phenanthrene	1/year
Pyrene	1/year
1,2,4-Trichlorobenzene	1/year

***Internal Outfall 103** - the discharge of treated sanitary wastewater.

Flow and Fecal Coliform shall be monitored once per 6 months. These monitoring frequencies were retained from the current permit, effective on April 1, 2002 and are consistent with the frequencies established for the Class I Sanitary General Permit, LAG530000.

PARAMETER(S)	MONITORING FREQUENCY
Flow	1/6 months
Fecal Coliform	1/6 months

2. Outfall(s) 002 - Commingled Stormwater & Utility Wastewater

***Outfall 002** - the discharge of uncontaminated stormwater runoff, utility fire test water overflow, excess clarifier water, demineralization water overflow, and firewater pump cooling water.

Flow, TOC, Oil & Grease, BTEX, and pH - shall be monitored once per quarter. These monitoring frequencies were retained from the current permit, effective on April 1, 2002.

PARAMETER(S)	MONITORING FREQUENCY
Flow	1/quarter
TOC	1/quarter
Oil & Grease	1/quarter
BTEX	1/quarter
pH	1/quarter

X. Compliance History/DMR Review:

1: A compliance history and DMR review was completed for the period of October 2004 through December 2006. **No excursions were reported** during that time.

DATE	PARAMETER	OUTFALL	REPORTED VALUE		PERMIT LIMITS	
			MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM
---	---	---	---	---	---	---

2. Inspections -

March 21, 2005 - A Compliance Evaluation Inspection was conducted. The inspector did not note any areas of concern.

June 13, 2006 - A Compliance Evaluation Inspection was conducted. The inspector noted that the facility failed to report a BOD_5 sample collected on 4/28/05 for Outfall 101 on the DMR. This incident was self reported (#78849) to the Department on 5/5/05. There were no other areas of concern.

June 27, 2007 - A Compliance Evaluation Inspection was conducted. The inspector did not note any areas of concern.

XI. "IT" Questions - Applicant's Responses

IT Questions and Westlake Styrene LP's responses can be found in the LPDES permit renewal application dated September 2006.

XII. Endangered Species:

The receiving waterbody, Subsegment 030301 of the Calcasieu River Basin is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated October 24, 2007 from Boggs (FWS) to Brown (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

XIII. Historic Sites:

The discharge is from an existing facility location, which does not include an expansion on undisturbed soils. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required.

XIV. Tentative Determination:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to permit for the discharge described in the application.

XV. Variances:

No requests for variances have been received by this Office.

XVI. Public Notices:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the fact sheet. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List